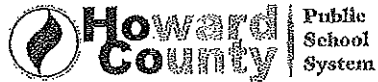


## Appendix H:

School Planning and the Adequate Public Facilities Ordinance

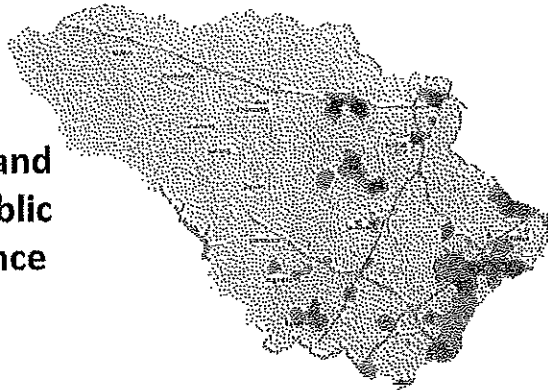
*Howard County Public School System*



***Presentation to the  
APFO Task Force***

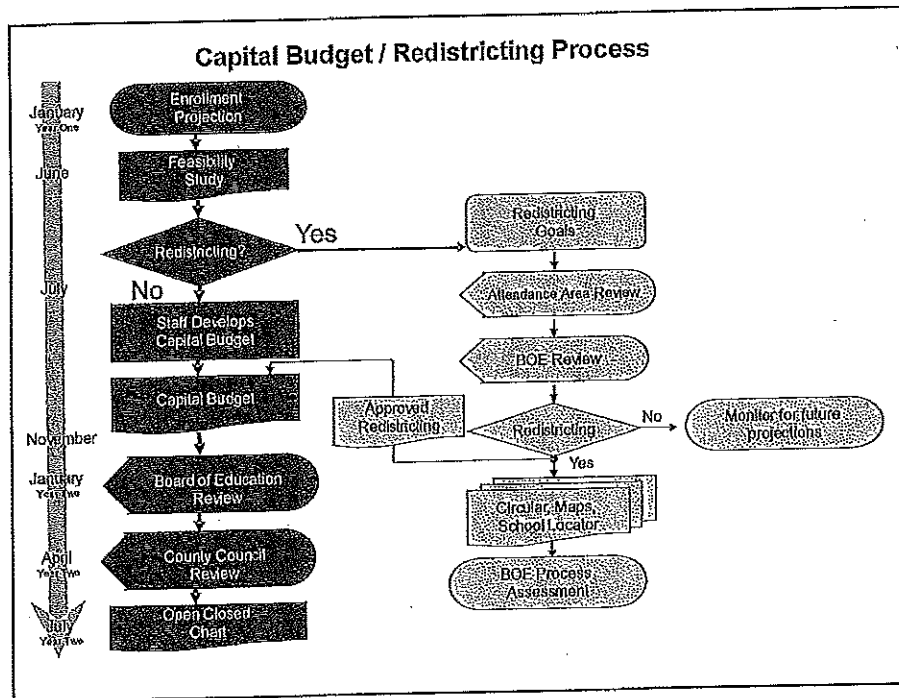
**School Planning and  
the Adequate Public  
Facilities Ordinance**

July 15, 2015



## Overview

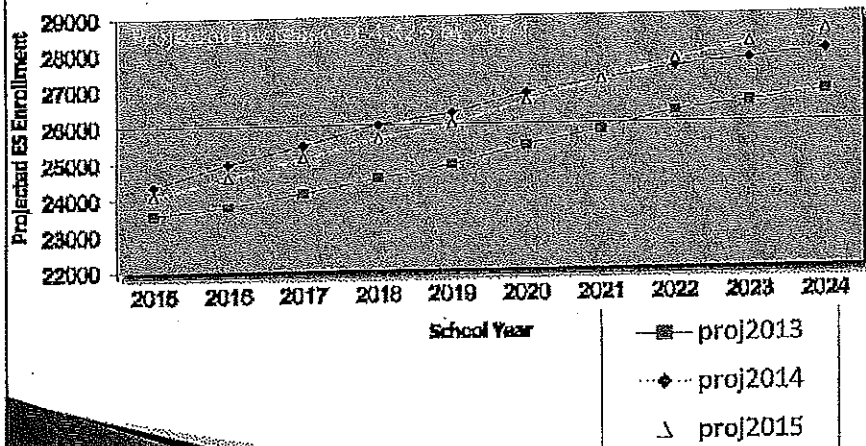
- ▶ Feasibility Study
  - Where is growth and what are trends?
  - Annual planning document
  - Provides new enrollment projection
  - Adjustments and additions to capital improvement program (CIP) and Long Range Master Plan.
  - Considers redistricting plans
  - Considers strategy for 2016-2025 period
  - Follows Policy 6010
- ▶ New school construction
- ▶ Redistricting process
- ▶ School Planning and APFO
  - The open/closed schools chart
  - How are student projections made



## Feasibility Study

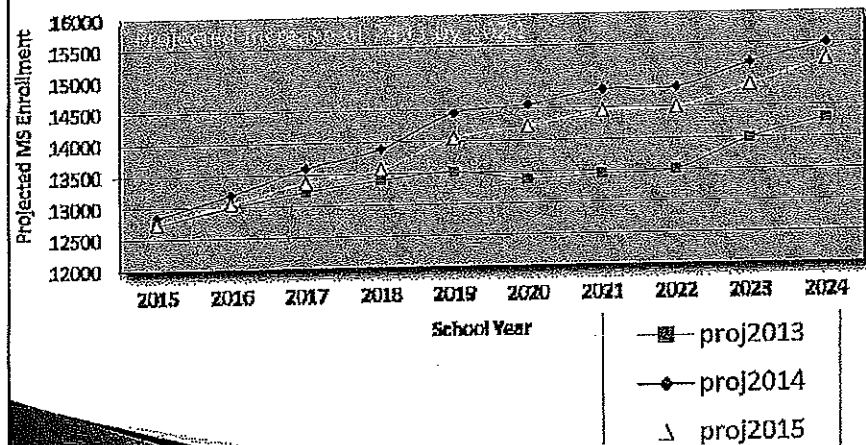
[www.hcpss.org/school-planning/](http://www.hcpss.org/school-planning/)

## Elementary Enrollment Trends

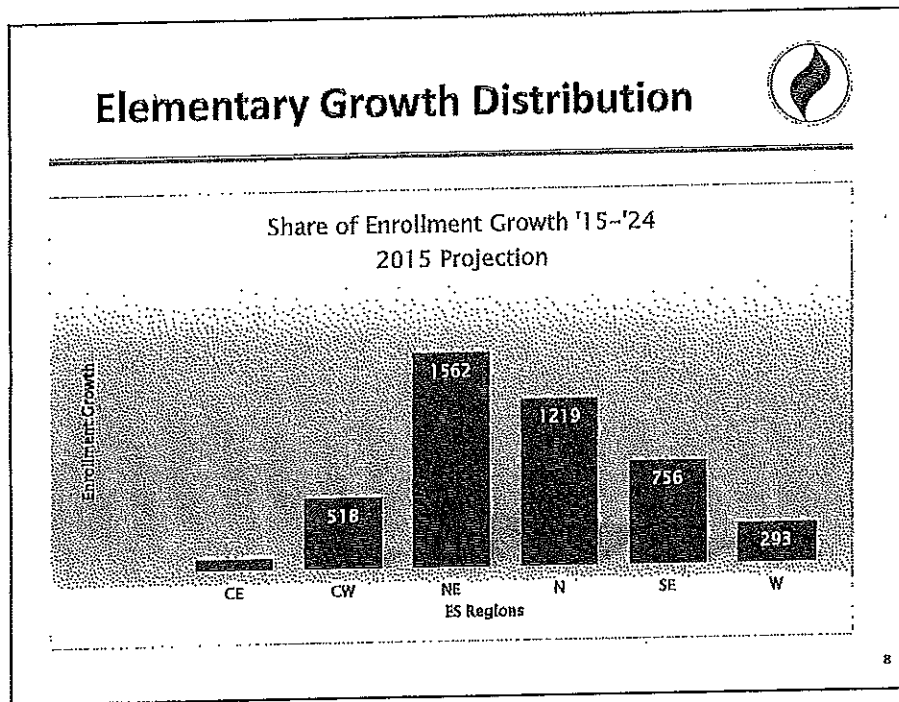
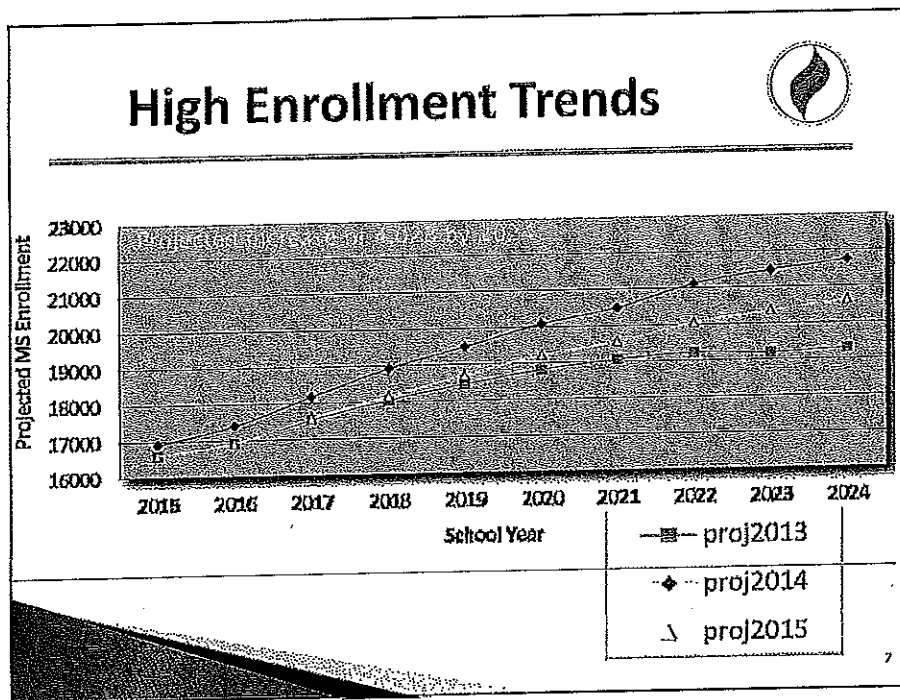


5

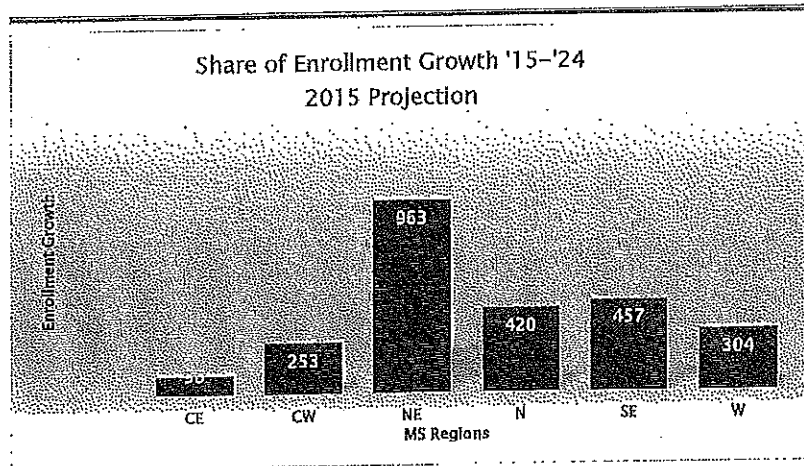
## Middle Enrollment Trends



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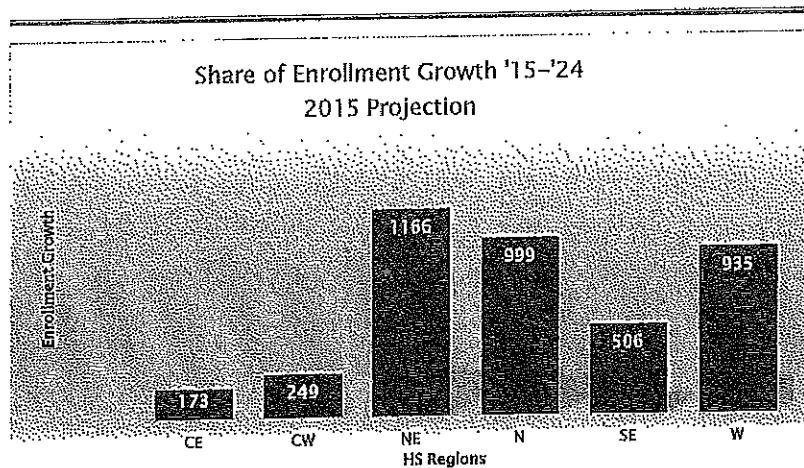


## Middle Growth Distribution



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## High Growth Distribution



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## Capacity Utilization Trends

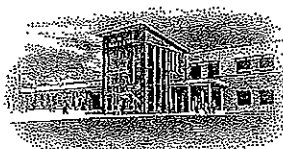


	Proj. '15 Enrollment	Capacity '15	Utilization '15	Proj. '24 Enrollment	Capacity '24	Utilization '24
LES	24,085	24,799	97.1%	28,511	26,556	107.4%
MS	12,734	13,086	97.3%	15,227	13,632	111.7%
HS	16,611	17,146	96.9%	20,639	17,146	120.4%

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LWES



WLMS



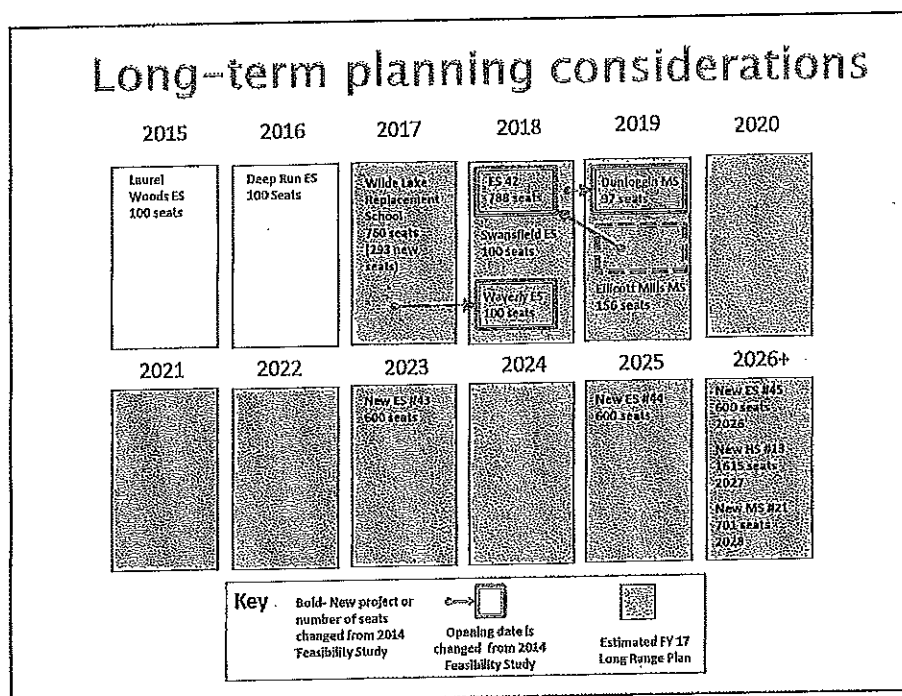
DRES

## School Construction

[www.hcpss.org/school-planning/](http://www.hcpss.org/school-planning/)

<http://www.hcpss.org/school-planning/construction/>

<http://www.hcpss.org/about-us/budgets/capital-budget/>



## Capacity

[www.hcpss.org/school-planning/](http://www.hcpss.org/school-planning/)



## HCPSS Capacity Calculations

- Elementary school capacity: Product of Board-approved student-to-teacher ratio and the number of teaching stations
- Middle school capacity: 95% of the product of the Board-approved student-to-teacher ratio and the number of teaching stations
- High schools: 80% or 85% of the product of the Board-approved student-to-teacher ratio and the number of teaching stations

## Why is State Capacity Different?

- › State uses slightly different student teacher ratios.
- › HCPSS excludes PreK and Special Education classrooms in the general education capacity calculation.
  - Regional program space subtracted from capacity
  - Pull out rooms are not classroom capacity
- › State does not update room use annually. Room use and the purpose of the room only assessed as needed with capital projects.
- › The state accepts smaller minimum square footage for classrooms.
- › See back of hand out for details

## Do Relocatable Classrooms Count?



APFO text: "Basis of chart. The basis of the open/closed chart is the assumptions used by the Department of Education in predicting enrollment, such as school capacity, current enrollment, demographic and growth trends, and the housing unit allocation chart."

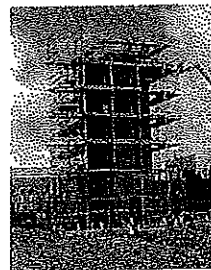
- BOE Policy: "Stand-alone-relocatable/modular units are for the short term and are not included in capacity calculations."



## Elementary Planning Considerations

### Eastern Regions

- Land acquisition
  - Eastern part of the county
  - Acquire site for high school site (paired with one other school)
- Plan for ES 43/44 in Southeast
- Consider interim program changes to open ES capacity
- ES 42 opens in 2018
  - Redistricting in 2017
  - Appx. 700 students
  - Multi-level improve feeds



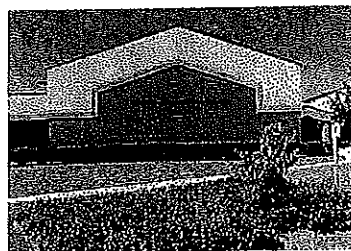
## Elementary Planning Considerations

- Columbia West
  - Interim use of new capacity at Swansfield
  - Redistricting could occur in 2017
  - Appx. 450 students
  - Plan for Columbia Town Center ES to open in 2028



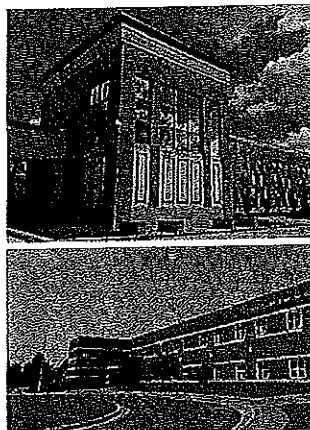
## Elementary Planning Considerations

- Northern and Western Regions
  - Redistricting to relieve overcrowding at Manor Woods ES
  - Addition at Waverly ES can maintain target capacity utilization in region until 2020
  - Consider West Friendship and Bushy Park capacity
  - Redistricting could occur in 2017
  - Appx 800 students.
  - Obtain a Turf Valley school site for long term needs



## Middle School Planning Considerations

- Multi-level redistricting in 2017 for 2018 to align feeds.
- Feasible redistricting could bring more schools into target utilization
- Acquire site in land bank for MS #21



## High School Planning Considerations

- Continue to evaluate long term plan.
- Consider program adjustments to balance capacity.
- Feasible redistricting could bring more schools into target utilization
- Acquire site in land bank for HS #13



## Redistricting Process

<http://www.hcpss.org/school-planning/redistricting-faqs/>

## Typical Redistricting Project

- › Winter-Spring
  - Staff prepares enrollment projection
  - Advertisement for volunteers to participate on Attendance Area Committee.
- › June
  - Feasibility Study including staff plan
  - Attendance Area Committee finalized and begins to meet.
- › September
  - Plans presented to community at two public major public meetings
  - Note: all meetings of committee are open to public
- › October – November
  - Superintendent's Recommendation
  - Board of Education public work sessions
  - Board of Education public hearing.
  - Final Recommendation

## Redistricting Process

- Policy 6010 – School Attendance Areas
- Decision-making
  - Staff technical analysis and recommendations
  - Public advice and comment
  - Superintendent recommendation
  - Board of Education decision
- Attendance Area Committee (AAC)
  - Committee of community members
  - Appointed by the Superintendent
  - Advise and comment during the planning phase regarding redistricting recommendations being developed by staff

## Redistricting Scenario Testing

- Staff uses planning polygons
  - Geographic units of 100 or less elementary students
  - Associate projection data to each polygon
- Scenarios are made by changing assignments of polygons
- Reports assess the effects of the scenario based upon considerations in policy

## Redistricting Concepts

- ▶ Feed – The percentage of students in the receiving school that come from a sending school of a lower organizational level (15%)
- ▶ Maximum Target Enrollment – 110% of the program capacity of a school facility
- ▶ Minimum Target Enrollment – 90% of the program capacity of a school facility

## Redistricting Concepts

- Planning Region – A geographic area of Howard County made up of one or more schools used by the Department of Education for planning purposes.
- School Attendance Area – Geographic area from which a school's students are drawn.

## Preconditions for Redistricting

- New school or addition is scheduled to open
- Facility damage or loss
- Enrollment changes above or below minimum.
- Capacity of a school building is altered
- Road network(s) changed
- Unforeseen circumstance

## Factors for Considering Redistricting

- › Educational welfare of the impacted students in both the sending and receiving schools
- › Frequency with which students are redistricted
- › Impact on the number of students bused and the distance bused—students travel
- › Cost
- › The demographic makeup and academic performance of students in both the sending and receiving schools
- › Number of students to be redistricted
- › Maintenance of feeder patterns
- › Changes in a school's program capacity
- › Impact on specialized or regional programs
- › Functional and operational capacity of school infrastructures
- › Building utilization (90-110 percent where possible)



## Policy

### ► Factors for Consideration:

- The demographic makeup and academic performance of students in both the sending and receiving schools.
- Number of students to be redistricted.
- Maintenance of feeder patterns. For example, avoiding the establishment of feeds less than 15% where possible.
- Changes in a school's program capacity.

## Policy

### ► Factors for Consideration:

- Impact on specialized or regional programs (e.g., special education, career and technology education, ESOL)
- Functional and operational capacity of school infrastructures (e.g., cafeterias, restrooms and other shared core facilities)
- Building utilization. For example, maintaining a target enrollment of a building's program capacity of between 90% and 110% where possible

## Next Dates

- **August 13, 2015** – Predevelopment public hearing on FY 17 Capital Budget
- **September 3, 2015** – Presentation of FY 17 Capital Budget
- **Redistricting is not scheduled until 2017**

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## Redistricting Timeline

- **June – August 2017:** Attendance Area Committee reviews plans, meetings open to public. Schedule will be posted on website
- **September 2017:** Draft redistricting plans presented at regional meetings.
- **October 2017:** Final staff plan presented to BOE.
- **November 2017:** BOE Meetings and vote

## Enrollment Projections

### Enrollment Projection

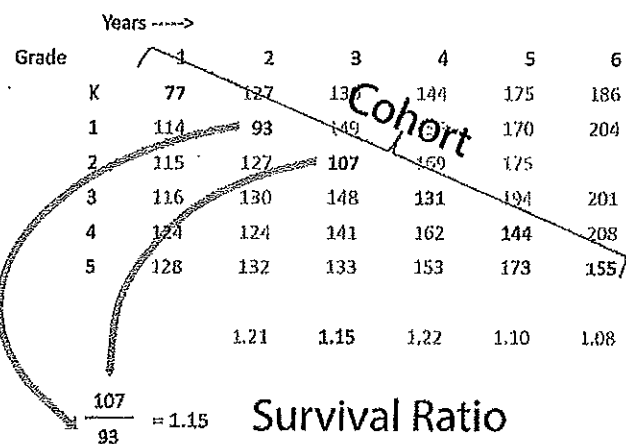


- › Projections are developed annually
- › Collaboration with state and local agencies for data
- › Based upon official September 30 enrollment report to Maryland State Department of Education
- › All data is geographically referenced to find trends in each school attending area

## Enrollment Projection Method



- Biggest task to effects for "cohorts," or age groups



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## Enrollment Projection Method



- Birth history from state
- Develop birth to kindergarten survival ratio
  - Choose method (1 year or average of 2 – 5 years)
  - Feed K-5 cohort model
- Calculate share of new enrollment from move-in
- Resale
  - Apartment retail
  - Preschool move in
- New Construction
- Track yields
  - Apply yields to housing projection

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## Enrollment Projection Method



- Apply housing factors to cohort model
- Track and apply out-of-district assignment patterns
- Rising 6<sup>th</sup>
  - Track share of cohort to each middle school
  - Project forward
  - Feed middle school cohort models
- Same exercise for each middle school and high school model

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## Projection Accuracy



- **2014 projection**
  - Reported to BOE on February 12, 2015
  - Error rate countywide and at each level no higher than 0.5 percent
  - 85 percent of schools had error rates at or below 5 percent
  - Approximately 25 percent of the schools were within 10 students of actual

40

## Enrollment Projection Method

### Benchmarking multi- year performance

- ▶ Maryland Department of Planning compiled enrollment projection data for 17 districts in MD in addition to HCPSS
- ▶ Enrollment projections produced in 2009 were analyzed for accuracy/error for five years

	Other Districts	HCPSS	Comment
Mean absolute error	218-1536 (sd 257-1887)	138-1072	HCPSS error below one standard deviation of group for all five years
Mean absolute percentage error	0.9-4.7% (sd 0.6-3.4%)	0.3-2.1%	

## Enrollment Projection Method

### Benchmarking multi- year performance

Forecasts made in 2009 by 17 LEAs \*

Forecast Year	Mean Absolute Error	Standard Deviation	Mean Absolute Percent Error	Standard Deviation
2010	218	257	0.9%	0.6%
2011	465	588	1.5%	1.0%
2012	860	1,026	2.7%	1.9%
2013	1,132	1,421	3.5%	2.5%
2014	1,536	1,887	4.7%	3.4%

Source: Maryland Department of Planning

\*does not include HCPSS

Forecasts made in 2009 by HCPSS

Forecast Year	Mean Absolute Error	Mean Absolute Percent Error
2010	138	0.3%
2011	525	1.1%
2012	495	1.0%
2013	819	1.6%
2014	1,072	2.1%

Source: Maryland Department of Planning

7/15/2015

## 2015 Feasibility Study



Thank you!

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